

# SMART Current Driver KCD2-SCD-Ex1.SP

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Current output up to 650 Ω load
- HART I/P and valve positioner
- Lead breakage monitoring
- Housing width 12.5 mm
- Connection via spring terminals with push-in connection technology
- Up to SIL 2 acc. to IEC/EN 61508















#### **Function**

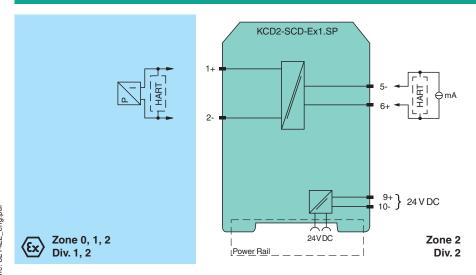
This isolated barrier is used for intrinsic safety applications.

The device repeats the input signal from a control system to drive SMART I/P converters, electrical valves, and positioners located in a hazardous

Digital signals are superimposed on the analog values at the field side or control side and are transferred bi-directionally. The current is transferred via a DC/DC converter and repeated at the output terminals.

An open field circuit presents a high impedance to the control side to allow alarm conditions to be monitored by the control system. Test sockets for the connection of HART communicators are integrated into the terminals of the device.

#### Connection



#### **Technical Data**

| General specifications               |                |   |
|--------------------------------------|----------------|---|
| Signal type                          |                | Analog output                               |
| Functional safety related parameters |                |   |
| Safety Integrity Level (SIL)         |                | SIL 2                                       |
| Supply                               |                |   |
| Connection                           |                | Power Rail or terminals 9+, 10-             |
| Rated voltage                        | $U_{r}$        | 19 30 V DC                                  |
| Ripple                               |                | ≤10 %                                       |
| Rated current                        | I <sub>r</sub> | $\leq$ 30 mA at 24 V                        |
| Power dissipation                    |                | $\leq600$ mW at 20 mA and 500 $\Omega$ load |

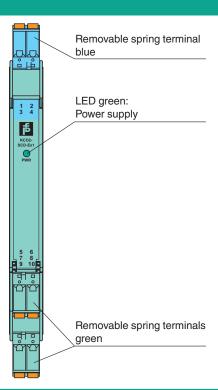
Refer to "General Notes Relating to Pepperl+Fuchs Product Information"

Release date: 2021-12-13 Date of issue: 2021-12-13 Filename: 321422\_eng.pdf

| Connection is december of the process of the control side (Connection is provided to approx. 26 mA input voltage (1 mput voltage) approx. 69 mA input voltage of the control system < 30 V voltage drop approx. 69 mA input voltage of the control system < 30 V voltage drop approx. 69 mA input resistance > 100 kΩ, with field wiring open           Connection side (Connection is decomposed to terminals 1+, 2-         field side (Connection is decomposed to terminals 1+, 2-           Voltage (Connection is decomposed to terminals 1+, 2-         2 13 V at 20 mA (Connection is decomposed to terminals 1+, 2-           Voltage (Connection is decomposed to terminals 1+, 2-         2 13 V at 20 mA (Connection is decomposed to terminals 1+, 2-           Voltage (Connection is decomposed to terminals 1+, 2-         2 0 m M (Connection is decomposed to terminals 1+, 2-           Voltage (Connection is decomposed to terminals 1+, 2-         2 0 m M (Connection is decomposed to terminals 1+, 2-           Risple (Connection is decomposed to terminals 1+, 2-         2 0 m M (Connection is decomposed to terminals 1+, 2-           Influence of ambient temperature (Connection is decomposed to temperature (Connection  | Technical Data                              |           |   |
|--|---|-----------|---|
| Connection   | Power consumption                           |           | ≤ 700 mW  |
| Connection is december of the process of the control side (Connection is provided to approx. 26 mA input voltage (1 mput voltage) approx. 69 mA input voltage of the control system < 30 V voltage drop approx. 69 mA input voltage of the control system < 30 V voltage drop approx. 69 mA input resistance > 100 kΩ, with field wiring open           Connection side (Connection is decomposed to terminals 1+, 2-         field side (Connection is decomposed to terminals 1+, 2-           Voltage (Connection is decomposed to terminals 1+, 2-         2 13 V at 20 mA (Connection is decomposed to terminals 1+, 2-           Voltage (Connection is decomposed to terminals 1+, 2-         2 13 V at 20 mA (Connection is decomposed to terminals 1+, 2-           Voltage (Connection is decomposed to terminals 1+, 2-         2 0 m M (Connection is decomposed to terminals 1+, 2-           Voltage (Connection is decomposed to terminals 1+, 2-         2 0 m M (Connection is decomposed to terminals 1+, 2-           Risple (Connection is decomposed to terminals 1+, 2-         2 0 m M (Connection is decomposed to terminals 1+, 2-           Influence of ambient temperature (Connection is decomposed to temperature (Connection  | Input                                       |           |   |
| Input signal   | Connection side                             |           | control side  |
| Input voltage  | Connection                                  |           | terminals 5-, 6+  |
| Valtage drop         approx. 6 V at 20 mA           Input resistance         > 100 kΩ, with field wring open           Connection side         field side           Connection         terminals 1+, 2-           Voltage         ≥ 13 V at 20 mA           Current         4 20 mA           Load         0 650 Ω           Rpple         20 mV me           Transfer characteristics         Devaition           Devaition         4 20 mA           < 1 filluence of ambient temperature  | Input signal                                |           | 4 20 mA , limited to approx. 26 mA  |
| Voltage drop   approx. 6 V at 20 mA   input resistance   > 100 kΩ, with field wiring open  | Input voltage                               |           |   |
| Unique         > 100 kΩ, with field wiring open           Output           Connection         6 field side           Connection         2 13 V at 20 mA           Current         4 20 mA           Load         0 650 Ω           Ripple         20 mV ms           Transfer characteristics         The state of full scale, incl. non-linearily and hysteresis           Influence of ambient temperature         < 2 μ/λ (2 0 70 °C (4 188 °F); < μ/λ (4 0 20 °C (40 4 °F))  |   |           | approx. 6 V at 20 mA  |
| Connection side         field side           Connection         terminals 1+, 2-           Voltage         ≈ 13 V at 20 mA           Current         4 20 mA           Load         0 650 Ω           Ripple         ≈ 20 mV ms           Transfer characteristics           Deviation         ≈ 120 °C (88 °F), 4 20 mA           c.01 % of full scale, incl. non-linearity and hysteresis         Influence of ambient temperature         < 2 μ/Δ K (20 70 °C (4 158 °F)); < 4 μ/Δ K (40 20 °C (40 4°F))           Frequency range         field side into the control side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the fiel  |   |           | > 100 kΩ, with field wiring open  |
| Connection         terminals 1+, 2-           Voltage         ≥ 13 V at 20 mA           Current         4 20 mA           Load         0 650 Ω           Ripple         20 mV  | Output                                      |           | • •   |
| Voltage         ≥ 13 V at 20 mA           Current         4 20 mA           Load         0 650 Ω           Ripple         20 mV , ms           Transfer characteristics           Deviation         at 20 °C (68 °F), 4 20 mA           Influence of ambient temperature         < 2 μA/K (20 70 °C (-4 158 °F)); < 4 μA/K (4020 °C (-40 4 °F))  | Connection side                             |           | field side  |
| Current  | Connection                                  |           | terminals 1+, 2-  |
| Load         0 650 Ω           Ripple         2 0 mV mms           Transfer Amacteristics           Deviation         at 20 °C (88 °F), 4 20 mA<br>< 0.1 % of full scale, incl. non-linearity and hysteresis   | Voltage                                     |           | ≥ 13 V at 20 mA   |
| Ripple         20 mV mms           Transfer characteristics         Transfer characteristics           Deviation         at 20 °C (68 °F), 4 20 mA<br>< 0.1 % of full scale, incl. non-linearity and hysteresis           Influence of ambient temperature         < 2 μA/K (20 70 °C (-4 158 °F)); < 4 μA/K (4020 °C (-404 °F))           Frequency range         field side into the control side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the control side into the control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) control side into the control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB) contr   | · ·   |           | 4 20 mA   |
| Transfer characteristics  Deviation   a120 °C (68 °F) 4 20 mA  | Load  |           | 0 650 Ω   |
| Transfer characteristics  Deviation   a120 °C (68 °F) 4 20 mA  | Ripple                                      |           | 20 mV <sub>rms</sub>  |
|  | Transfer characteristics                    |           |   |
| Influence of ambient temperature   | Deviation                                   |           |   |
| Frequency range field side into the control side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (3 dB) to 10 to 90 % ≤ 10 ms  Galvanic isolation  Input/Output  |   |           |   |
| control side into the field side: bandwidth with 0.5 V <sub>po</sub> signal 0 3 kHz (-3 dB) Rise time  8 10 to 90 % ≤ 10 ms  8 alvanic isolation Input/Output Input/Dower supply Input/Dower supply Input/Dower supply Input/Dower supply Indicators/settings Display elements Labeling Directive conformity Electromagnetic compatibility Directive conformity Electromagnetic compatibility Directive and patient of the field side is a side insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub> Indicators/settings  Display elements Labeling Directive conformity Electromagnetic compatibility Directive conformity Electromagnetic compatibility Directive 2014/30/EU Electromagnetic compatibility Directive 2014/30/EU Electromagnetic compatibility Directive 2014/30/EU Electromagnetic compatibility Electromagnetic compatibility Directive 2014/30/EU Electromagnetic compatibility Electromagnetic compatibility Electromagnetic compatibility Electromagnetic compatibility Electromagnetic compatibility Electromagnetic option UEC 60529 Protection against electrical shock Ambient conditions  Ambient temperature -40 70 °C (-40 158 °F)  Mechanical specifications  Degree of protection IP20 Connection ECOnnection Spring terminals Mass approx. 100 g Dimensions Mass approx. 100 g Dimensions Dimensions Dimensions EU-type examination certificate EU-type examination certificate EU-type examination certificate EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  EU-type examination certificate  E                        | ·   |           |   |
| Galvanic isolation Input/Output basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>ett</sub> basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>ett</sub> input/Output/power supply reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>ett</sub> indicators/settings  Display elements LED Labeling space for labeling at the front  Directive conformity  Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 (industrial locations)  Conformity  Electromagnetic compatibility Directive 2014/30/EU EN 61326-3:2:2018  Electromagnetic compatibility Electromagnetic protection Electromagnetic compatibility Electromagnetic compatibility Electromagnetic compatibility Electromagnetic compatibility Electromagnetic compatibility Electromagnetic protection Electromagnetic compatibility Electromagnetic compatib |   |           | control side into the field side: bandwidth with 0.5 V <sub>pp</sub> signal 0 3 kHz (-3 dB)   |
| Input/Output basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert Input/power supply basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61326-1.2013 (industrial lo                               |   |           | 10 to 90 % ≤ 10 ms  |
| Input/power supply basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Vert END.  Labeling 300 Seption 1000 Seption 10                               | Galvanic isolation                          |           |   |
| reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 Venticators/settings  Dispaly elements Labeling Directive conformity  Electromagnetic compatibility Directive 2014/30/EU  Electromagnetic compatibility Directive 2014/30/EU  Electromagnetic compatibility Directive 2014/30/EU  Electromagnetic compatibility                                | Input/Output                                |           |   |
| Indicators/settings Display elements Labeling space for labeling at the front Directive conformity  Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 (industrial locations)  Conformity  Electromagnetic compatibility Electromagnetic 2:00132:00132 Electromagnet                               | Input/power supply                          |           | basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 $V_{\text{eff}}$   |
| Display elements Labeling Space for labeling at the front  Directive conformity  Electromagnetic compatibility Directive 2014/30/EU Electromagnetic compatibility Directive 2014/30/EU Electromagnetic compatibility Electromagnetic electromagn                               | Output/power supply                         |           | reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 $V_{\rm eff}$ |
| Labeling space for labeling at the front  Directive conformity  Electromagnetic compatibility Directive 2014/30/EU  EN 61326-1:2013 (industrial locations)  Conformity  Electromagnetic compatibility Electromagnetic co                               | Indicators/settings                         |           |   |
| Electromagnetic compatibility Directive 2014/30/EU Electromagnetic compatibility Directive 2014/30/EU Electromagnetic compatibility Electromagnetic compatible compatible compatible compatible compatible compatible co                               | Display elements                            |           | LED   |
| Electromagnetic compatibility Directive 2014/30/EU  Enotromagnetic compatibility  Electromagnetic compatible electromagnetics  Electromagnetic electromagnetics  Ele                               | · · ·                                       |           | space for labeling at the front   |
| Directive 2014/30/EU EN 61326-1:2013 (industrial locations)  Conformity  Electromagnetic compatibility NE 21:2017 EN 61326-3:22018  Degree of protection   EC 60529  Protection against electrical shock UL 61010-1:2012  Ambient conditions  Ambient temperature -40 70 °C (-40 158 °F)  Mechanical specifications  Degree of protection   IP20  Connection spring terminals  Mass approx. 100 g  Dimensions   12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  Mounting on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate   CESI 06 ATEX 021  Marking   Dil (1)D [Ex ia Da] IIIC   Dil (1)D  | Directive conformity                        |           |   |
| Electromagnetic compatibility  Electromagnetic compatibility  Degree of protection  Degree of protection against electrical shock  WL 61010-1:2012  Ambient conditions  Ambient temperature  -40 70 °C (-40 158 °F)  Mechanical specifications  Degree of protection  Degree of protection  Spring terminals  Mass  approx. 100 g  Dimensions  Dimensions  12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  Mounting  Data for application in connection with hazardous areas  EU-type examination certificate  CESI 06 ATEX 021  Marking  Marking  Dutput  Ex ia  Supply  Maximum safe voltage  Um  250 V AC (Attention! Um is no rated voltage.)  Equipment   | . ,   |           |   |
| Electromagnetic compatibility  Degree of protection  EC 60529  Protection against electrical shock  UL 61010-1:2012  Ambient conditions  Ambient temperature  -40 70 °C (-40 158 °F)  Mechanical specifications  Degree of protection  IP20  Connection  Spring terminals  Mass  approx. 100 g  Dimensions  12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  Mounting  On 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate  CESI 06 ATEX 021  Marking  Waiting  Wa                                       |   |           | EN 61326-1:2013 (industrial locations)  |
| Degree of protection IEC 60529 Protection against electrical shock UL 61010-1:2012 Ambient conditions Ambient temperature -40 70 °C (-40 158 °F)  Mechanical specifications  Degree of protection protection spring terminals approx. 100 g Dimensions 12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D), housing type A2 on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate CESI 06 ATEX 021  Marking BII (1)G [Ex ia Ga] IIC BIII (1)G [Ex ia Da] IIIC BIII (1)G [Ex ia Da] IIIC BIIIC BIII (1)G [Ex ia Da] IIIC BIIIC BIII (1)G [Ex ia Da] IIIC BIIIC BIII                                       | •   |           |   |
| Protection against electrical shock  Ambient conditions  Ambient temperature  -40 70 °C (-40 158 °F)  Mechanical specifications  Degree of protection  IP20  Connection  spring terminals  Mass  approx. 100 g  Dimensions  12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate  Marking  CESI 06 ATEX 021  Marking  UI (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC  II (1)D [Ex ia Da] IIIC  II (1)D [Ex ia Ma] I  Output  Ex ia  Supply  Maximum safe voltage  Um  250 V AC (Attention! Um is no rated voltage.)  Equipment  | Electromagnetic compatibility               |           |   |
| Ambient conditions  Ambient temperature  | Degree of protection                        |           | IEC 60529   |
| Ambient temperature  -40 70 °C (-40 158 °F)  Mechanical specifications  Degree of protection  IP20  Connection  spring terminals  Mass  approx. 100 g  Dimensions  12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  Mounting  on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate  CESI 06 ATEX 021  Marking  Will (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC  II (MI) [Ex ia Ma] I  Output  Ex ia  Supply  Maximum safe voltage  Um  250 V AC (Attention! Um is no rated voltage.)  Equipment   | Protection against electrical shock         |           | UL 61010-1:2012   |
| Degree of protection IP20 Connection spring terminals  Mass approx. 100 g Dimensions 12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  Mounting on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate CESI 06 ATEX 021  Marking II (1)G [Ex ia Ga] IIC  III (1)D [Ex ia Da] IIIC  III (1)D [Ex ia Ma] II  Output Ex ia  Supply  Maximum safe voltage Um 250 V AC (Attention! Um is no rated voltage.)  Equipment terminals 1+, 2-   | Ambient conditions                          |           |   |
| Degree of protection IP20  Connection spring terminals  Mass approx. 100 g  Dimensions 12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  Mounting on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate CESI 06 ATEX 021  Marking SIII (1)G [Ex ia Ga] IIC SIII (1)G [Ex ia Da] IIIC SIII (1)G [Ex ia Ma] IIC SIII (1)G                                | Ambient temperature                         |           | -40 70 °C (-40 158 °F)  |
| Connection spring terminals  Mass approx. 100 g  Dimensions 12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  Mounting on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate CESI 06 ATEX 021  Marking BII (1)G [Ex ia Ga] IIC  BII (1)D [Ex ia Da] IIIC  BII (1)D [Ex ia Ma] I  Output Ex ia  Supply  Maximum safe voltage U <sub>m</sub> 250 V AC (Attention! U <sub>m</sub> is no rated voltage.)  Equipment terminals 1+, 2-  | Mechanical specifications                   |           |   |
| Mass approx. 100 g  Dimensions 12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2  Mounting on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate CESI 06 ATEX 021  Marking II (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC  II (1)D [Ex ia Ma] I  Output Ex ia  Supply  Maximum safe voltage Um 250 V AC (Attention! Um is no rated voltage.)  Equipment terminals 1+, 2-  | Degree of protection                        |           | IP20  |
| Dimensions  Mounting  on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate  CESI 06 ATEX 021  Marking  © II (1)G [Ex ia Ga] IIC  © II (1)D [Ex ia Da] IIIC  © I (M1) [Ex ia Ma] I  Output  Ex ia  Supply  Maximum safe voltage  Um  250 V AC (Attention! Um is no rated voltage.)  Equipment  terminals 1+, 2-   | Connection                                  |           |   |
| Mounting on 35 mm DIN mounting rail acc. to EN 60715:2001  Data for application in connection with hazardous areas  EU-type examination certificate CESI 06 ATEX 021  Marking  | Mass  |           | approx. 100 g   |
| EU-type examination certificate  CESI 06 ATEX 021  Marking  SII (1)G [Ex ia Ga] IIC  III (1)D [Ex ia Da] IIIC  III (1)D [Ex ia Ma] IIIC  III (1)D [Ex ia Ga] III  III (1)D [Ex ia Ga] IIIC  III (1)D [Ex ia Ga] III  III (1)                               | Dimensions                                  |           | 12.5 x 124 x 114 mm (0.5 x 4.9 x 4.5 inch) (W x H x D) , housing type A2                      |
| EU-type examination certificate  Marking  © II (1)G [Ex ia Ga] IIC © II (1)D [Ex ia Da] IIIC Output  Ex ia  Supply  Maximum safe voltage  Um  250 V AC (Attention! Um is no rated voltage.)  Equipment  terminals 1+, 2-   | Mounting                                    |           | on 35 mm DIN mounting rail acc. to EN 60715:2001  |
| Marking  © II (1)G [Ex ia Ga] IIC © I (M1) [Ex ia Da] IIIC Output  Ex ia  Supply  Maximum safe voltage  Um  250 V AC (Attention! Um is no rated voltage.)  Equipment  terminals 1+, 2-   | Data for application in connection with haz | zardous a | reas  |
| © II (1)D [Ex ia Da] IIIC © I (M1) [Ex ia Ma] I  Output Ex ia  Supply  Maximum safe voltage U <sub>m</sub> 250 V AC (Attention! U <sub>m</sub> is no rated voltage.)  Equipment terminals 1+, 2-   | EU-type examination certificate             |           | CESI 06 ATEX 021  |
| Output Ex ia  Supply  Maximum safe voltage U <sub>m</sub> 250 V AC (Attention! U <sub>m</sub> is no rated voltage.)  Equipment terminals 1+, 2-  | Marking                                     |           |   |
| Supply  Maximum safe voltage  U <sub>m</sub> 250 V AC (Attention! U <sub>m</sub> is no rated voltage.)  Equipment  terminals 1+, 2-  | Output                                      |           |   |
| Maximum safe voltage U <sub>m</sub> 250 V AC (Attention! U <sub>m</sub> is no rated voltage.)  Equipment terminals 1+, 2-  | ·   |           |   |
| Equipment terminals 1+, 2-   |   | $U_m$     | 250 V AC (Attention! U <sub>m</sub> is no rated voltage.)                                     |
|  | •   | - 141     |   |
|  | Voltage U <sub>o</sub>                      |           | 25.2 V  |

#### **Assembly**

#### Front view



#### **Matching System Components**



Power Feed Module KFD2-EB2



## **Matching System Components**

| UPR-03           | Universal Power Rail with end caps and cover, 3 conductors, length: 2 m        |
|------------------|--|
| UPR-03-M         | Universal Power Rail with end caps and cover, 3 conductors, length: 1,6 m      |
| UPR-03-S         | Universal Power Rail with end caps and cover, 3 conductors, length: 0.8 m      |
| K-DUCT-BU        | Profile rail, wiring comb field side, blue                                     |
| K-DUCT-BU-UPR-03 | Profile rail with UPR-03- * insert, 3 conductors, wiring comb field side, blue |

### **Accessories**

|   | KC-CTT-5GN    | Terminal block for KC modules, 2-pin spring terminal, with test sockets, green |
|---|---------------|--|
|   | KC-CTT-5BU    | Terminal block for KC modules, 2-pin spring terminal, with test sockets, blue  |
|   | KC-CTT-3GN2BU | Terminal block for KC modules, 2-pin spring terminal, with test sockets        |
| * | KF-CP         | Red coding pins, packaging unit: 20 x 6  |